SLS Subscale Model Acoustic Test Program (SMAT)

- **5% Geometric Scale of Block 1 and ML Configuration**
  - Operational / Functional Features
    - – Water Sound Suppression System
      - Rainbirds
      - Trench / Duct Water
    - – Telescoping Vertical Adapter Structure
    - – Solid Motors and Liquid Engines

- **Objectives**
  - Verify predicted Liftoff Acoustic (LOA) Environments for Vehicle and Pad
    - – SPL vs. frequency, Spatial correlation values per zone
  - Verify predicted Ignition Overpressure (IOP) Environments for Vehicle and Pad
  - Assess water suppression system effectiveness
    - – Hold Down Tests for Trench / Duct Water
    - – Elevation Tests for Rainbirds

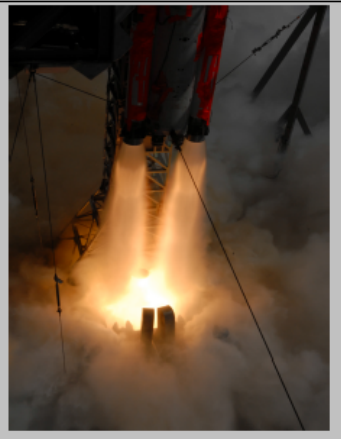
- **Have successfully completed 25 Core Only Tests and 13 Full Assembly Tests**

Liquid Thruster Firing

SMAT Vehicle Model

Solid Rocket Motor

Full Propulsion System Firing



Liquid Thruster Vertical Firing